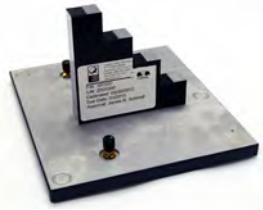
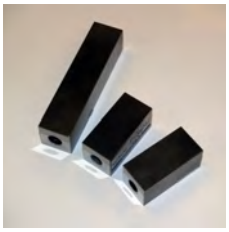
QVI Calibration
Reference Standards & Accuracy Specification Conditions

The following QVI Reference Standards are typically used for system accuracy certification and verification.

Verification	Standard
• E_1 Z Linear	Step Gages, or Gage Blocks
• E_2 XY Area	2D Reticles
• E_1 Linear • E_2 XY Area • E_3 XYZ Volumetric	Linescales
• E_1 Linear • E_2 XY Area • E_3 XYZ Volumetric	Laser Interferometers

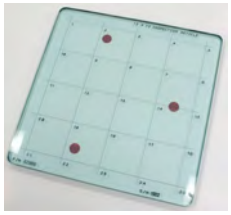


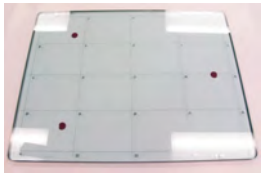
Step Gage



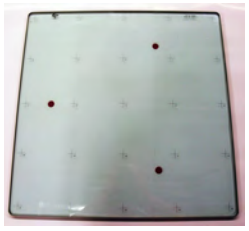
Gage Blocks

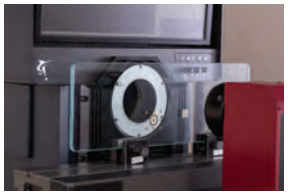
E_1 Linear - Z





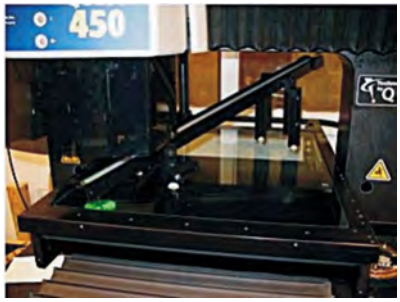
2D Reticles



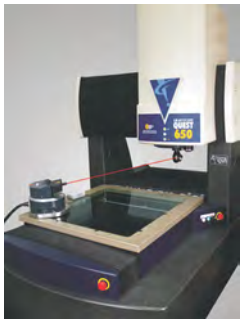


E_2 Area - XY

E_3 Volumetric - XYZ



Linear Linescale



Etalon LaserTRACER Laser Interferometer

Standard Conditions for Verifying System Accuracy

- All stated accuracies assume a thermally stable system operated in the rated environment as specified on individual technical data sheets.
- All optical accuracy specifications for E_1 Z linear, E_2 XY area, and E_3 XYZ volumetric are verified at maximum optical/digital magnification with standard front lens, unless stated otherwise.
- When specified on individual technical data sheets, E_2 XY area accuracy is verified with the artifact in the standard measuring plane.
- XY accuracy performance is verified with evenly distributed load, with weight within limits specified on machine's individual data sheet. Depending on load distribution, accuracy at maximum load may be less than standard accuracy.
- Volumetric accuracy performance requires use of QVI 3D metrology software, such as MeasureMind® 3D.